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## PCW\_\_09\_\_22 Coordinate transformations v19

### Question 1

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f\left[\frac{x+6}{9}\right] + 5}{8}$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 2

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f[6x + 8] - 2}{4}$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 3

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = 9 \cdot \left( f\left[\frac{x}{4} + 6\right] + 5 \right)$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

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### Question 4

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = \frac{f[5(x-2)]}{8} - 9$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 5

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = 7 \cdot f[3(x+5)] + 4$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.

### Question 6

Consider the two functions  $f$  and  $g$ , where  $g$  is defined as a transformation of  $f$ :

$$g[x] = 7 \cdot \left( f \left[ \frac{x-4}{6} \right] - 9 \right)$$

For point  $(a, b)$  on curve  $f$  there is a corresponding point on the curve  $g$ . Write the coordinate transformation.